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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/505,445

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EXAMINER

AFOLABI, MARK O

ART UNIT

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4122

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PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/505,445	Applicant(s) SIMONIS, HELMUT MATTHIAS	
	Examiner MARK O. AFOLABI	Art Unit 4122	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 02/17/2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-18 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-18 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 17 February 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>07/11/2005</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

This communication is in response to application No. 10/505,445 filed on 02/17/2003, claims 1-18 have been examined.

Specification

1. Applicant is reminded of the proper language and format for an abstract of the disclosure. The abstract should be in narrative form and generally limited to a single paragraph on a separate sheet within the range of 50 to 150 words.

Furthermore, ***the form and legal phraseology often used in patent claims, such as "means" and "said," should be avoided*** [E.g. per applicant, "said communications network"]. The abstract should describe the disclosure sufficiently to assist readers in deciding whether there is a need for consulting the full patent text for details. The language should be clear and concise and should not repeat information given in the title. It should avoid using phrases which can be implied, such as, "The disclosure concerns," "The disclosure defined by this invention," "The disclosure describes," etc. Appropriate correction is required.

Claim Objections

2. Claims 1, 4 and 15 are objected to because of the following informalities: The use of slashes symbol between descriptive elements in the claims renders the scope and meaning of the claims unclear, as slashes could be construed to mean "and", "or" or both "and" and "or". For the purpose of examining, examiner will take only "or" into consideration. Appropriate correction is required.

Double Patenting

The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the “right to exclude” granted by a patent and to prevent possible harassment by multiple assignees. A nonstatutory obviousness-type double patenting rejection is appropriate where the conflicting claims are not identical, but at least one examined application claim is not patentably distinct from the reference claim(s) because the examined application claim is either anticipated by, or would have been obvious over, the reference claim(s). See, e.g., *In re Berg*, 140 F.3d 1428, 46 USPQ2d 1226 (Fed. Cir. 1998); *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) or 1.321(d) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent either is shown to be commonly owned with this application, or claims an invention made as a result of activities undertaken within the scope of a joint research agreement. Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

Claims 1, 12, 15 and 16-18 are rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claim 1, 5 and 14 of U.S. Patent No. 7,302,482, (hereafter, "the '482 patent"). Although the conflicting claims are not identical, they are not patentably distinct from each other because the subject matter claimed in the instant application is fully disclosed in the '482 patent.

Regarding claim 14, the broader claim would have been obvious in view of the narrower issued claim 1 of the '482 patent. Both claims recite the limitations, " a method of calculating traffic [data flow] values or intervals in a communications network, the communications network comprising a plurality of nodes, the nodes being connected to one another by links, the method comprising, obtaining traffic data through said nodes and links as input data, and calculating a cumulated traffic flow from a selected first node to a selected second node using said input traffic data. Therefore, it would have been obvious to one of ordinary skill in the art at the time of invention to calculating data flow in a communications network, comprising a plurality of nodes (source, internal and destination) being connected to one another by links in claim 14 and claim 1 of the '482 patent. Similarly, claims 12, 15 and 16-18 of the instant application are obvious variants encompassed by claims 1, 5 and 14 of the '482 patent. Both the instant application and the '482 patent are commonly recite a method of calculating traffic. Hence, the same rationale of rejection is applicable.

Claim Rejections – 35 USC § 101

3. 35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

Claim 18 is rejected under 35 U.S.C. 101 as being directed to non-statutory subject matter.

Claim 18 is claiming software per se, this claim recites a “computer program for performing the method of claim 15 when operated in a computer system” (a program is an abstract idea or a data structure). Therefore, this claim is not limited to statutory subject matter and it preempts the judicial exception, see, *Gottschalk v. Benson*, 409 U. S. 63, 175 USPQ 673 (1972).

Claim Rejections - 35 USC § 102

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Regarding rejected claims 1-5, 11 and 14-18 under 35 U.S.C § 102 (e) as being anticipated by Gary MacIsaac (U.S. 2004/0257999 A1) (Hereinafter MacIsaac).

Art Unit: 4122

Regarding claim 1, a method of estimating traffic values or intervals in a communications network, the network comprising a plurality of nodes being interconnected by links [routers, connected by data link, 0033], the method comprising the steps of

(a) obtaining traffic data [receives all packet] through said nodes and/or links as input data [0040];

(b) obtaining network data relating to the network topology and network behavior [0090]; and

(c) estimating the effect of a modification of said communications network and/or its behavior [communication link, 0040 and 0077] by calculating traffic information [statistical information about the network traffic, 0046] between a selected first [first link] and a selected second node [second link] [0040] of said network using said input data [0046].

Regarding claim 2, wherein said traffic information is a cumulated traffic [0069]

Regarding claim 3, wherein said input traffic data are measurements [parameter] of traffic data obtained from said network [0047].

Regarding claim 4, wherein said modification of said network or network behaviour comprises one or more of: a modification [e.g., disable link, 0077] of the network topology, a modified routing algorithm parameter, a modified traffic engineering constraint and/or a modified traffic load [0076 - 0081].

Regarding claim 5, comprising the step of correcting said input traffic data if inconsistencies are detected [value ... corrected to include all data in link 6 by adding to the value] [0067].

Regarding claim 7, comprising evaluating the impact of the network or network behaviour modification from the calculated traffic information [0076].

Regarding claim 8, repeating step (c) for different pairs [establishing ... connections with one another, 0036] of said first and second nodes [first and second link, 0040] corresponding to different modifications [0040 and 0045].

Regarding claim 9, comprising the step of selecting [method 20, comprise a number of steps, 0045], according to predefined criteria [instruction, 0045], one or more candidates for modifying said communications network corresponding to one or more of said modifications [0045 and Fig. 4].

Regarding claim 10, comprising the step of calculating a detailed analysis of traffic values or traffic intervals for one or more of the selected candidates [0046].

Regarding claim 11, wherein said traffic values or intervals are calculating using a traffic flow model being based on [0046]

- (a) traffic data measurements through said nodes and links as input data [0040 and 0046]; and
- (b) a plurality of constraints ["imposing a packet filtering rule", 0046] describing network topology and behaviour [0076].

Regarding claim 14, a method of calculating traffic values [values calculated by ...estimation, 0096] or intervals in a communications network, the communications network comprising a plurality of nodes, the nodes being connected to one another by links[routers, connected by data link, 0033], the method comprising:

obtaining traffic data through said nodes and links as input data [0040]; and
calculating a cumulated traffic flow [statistical information about the network traffic] from a selected first node to a selected second node using said input traffic data [0046].

Regarding claim 15 this claim comprises a method of modifying a communications network, which is substantially the same steps discussed by each respective step in the method of claim 1, thereby same rationale of rejection is applicable

Regarding claim 16, this claim comprises an apparatus for calculating traffic values in a communications network, which is substantially the same steps discussed by each respective step in the method of claim 1, thereby same rationale of rejection is applicable

Regarding claim 17, this claim comprises a network management system for managing a network, which is substantially the same steps discussed by each respective step in the method of claim 1, thereby same rationale of rejection is applicable

Regarding claim 18, this claim comprises a computer program for performing the method which is substantially the same steps discussed by each respective step in the method of claim 1, thereby same rationale of rejection is applicable

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 6, 12 and 13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Gary MacIsaac (US 2004/0257999 A1) (hereafter MacIsaac) in view of Fielscher et. al. (US 2003/0058798 A1) (hereafter Fielscher).

Regarding claim 6, wherein said traffic information is calculated using linear constraints in a traffic flow model.

MacIsaac teaches a method of estimating traffic values or intervals in a communications network, the network comprising a plurality of nodes being interconnected by links [routers, connected by data link, 0033], obtaining traffic data through said nodes and/or links as input data [0040], obtaining network data relating to the network topology and network behavior [0090] and estimating the effect of a modification of said communications network and/or its behavior [communication link, 0040 and 0077] by calculating traffic information [statistical information about the network traffic, 0046].

But, MacIsaac does not explicitly teach traffic information is been calculated using linear constraints.

However, Fielscher teaches network traffic information is calculated using linear constraints in a traffic flow model [linear program [constraint] may be used to model how to route traffic in the Internet] [0052].

It would have been obvious to one of ordinary skill in the art at the time invention was made, given the suggestions of MacIsaac and Fielscher to use linear constraints in calculating network traffic information in a traffic flow model.

One would be motivated to utilize optimization statistical tool, such as linear constraints in calculating network traffic information in any end to end network communication system.

Claim 12 is rejected under 35 U.S.C. 103(a) as being unpatentable over Gary MacIsaac (US 2004/0257999 A1) (hereafter MacIsaac) and Fielscher et. al. (US 2003/0058798 A1) (hereafter Fielscher).

Regarding claim 12, a method of calculating traffic values or intervals in a communications network, the communications network comprising a plurality of nodes, the nodes being connected to one another by links [routers, connected by data link, 0033], the method comprising:

calculating the cumulated traffic flow between a first and a second of said nodes in a traffic flow model using linear constraints;

said traffic flow model being based on

- (a) traffic data measurements through said nodes and links as input data; and
- (b) a plurality of constraints describing the network topology and behaviour.

MacIsaac teaches a method of calculating traffic values or intervals in a communications network, the network comprising a plurality of nodes being interconnected by links [routers, connected by data link, 0033], calculating the cumulated traffic flow between a first and a second of said nodes in a traffic flow model [0046], traffic data measurements through said nodes and links as input data [0040 and 0046]; and a plurality of constraints describing the network topology and behaviour [0076].

But, MacIsaac does not explicitly teach traffic information is been calculated using linear constraints.

However, Fielscher teaches network traffic information is calculated using linear constraints in a traffic flow model [linear program [constraint] may be used to model how to route traffic in the Internet] [0052].

Thus, it would have been recognized by one of ordinary skill in the art to modify MacIsaac teaching of calculating traffic values or intervals in a communications network, with Fielscher's technique, it would have yielded predictable results and resulted in an improved system, namely, a system that would calculate cumulated traffic flow using linear constraints technique to obtain a provably good solution to this linear program

utilizing e-approximation methods proven to be computationally effective in practice [0048].

Regarding claim 13, comprising the step of correcting said input data if inconsistencies are detected [0067, Maclsaac].

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to MARK O. AFOLABI whose telephone number is (571) 270-5627. The examiner can normally be reached on Monday-Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Beatriz Prieto can be reached on 571-272-3902. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Application/Control Number: 10/505,445
Art Unit: 4122

Page 12

/M.O.A/

Art Unit: 4122

/Ashok B. Patel/

Primary Examiner, Art Unit 2154